

COPY FOR IB

PCT/KR2005/000302

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

Ki-Ryung, Kim

KING ROAD PTLF, Suite 201, Seo-Joh Bldg., 103-15
Garwol-Dong, Yongsan-Gu, Seoul 110-602 Republic of Korea

18/8

WRITTEN OPINION OF THE PCT
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) 25 JULY 2005 (25.07.2005)

Applicant's or agent's file reference

wa-pct-0115

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/KR2005/000302

International filing date (day/month/year)

02 FEBRUARY 2005 (02.02.2005)

Priority date (day/month/year)

05 FEBRUARY 2004 (05.02.2004)

International Patent Classification (IPC) or both national classification and IPC

IPC7 B23H 1/04

Applicant

PUNG KUK EDM WIRE MANUFACTURING CO., LTD et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

TAK, Hyeong Yeop

Telephone No. 82-42-481-5408



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/KR2005/000302

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
☐ table(s) related to the sequence listing

b. format of material

- ☐ in written format
☐ in computer readable form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/KR2005/000302

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 7	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 7	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 7	YES
	Claims		NO

2. Citations and explanations :

Claim 1-6 relate to a manufacturing method of an electrode wire for EDM.

Claim 7 relates to an electrode wire for EDM.

The symbol 'm' (eg. used for thickness of zinc coating in claim 1) in descriptions and claims is considered the misprint of μm (micrometer).

It is considered that the degree is omitted in front of C (Celsius) in claim 1.

The degree (for angle) is considered to be omitted in claim 5.

Reference is made to the following documents.

D1 : JP 15-291030 A (OKIELECTRICCABLE COLTD) 14 OCTOBER 2003

1. Novelty

The subject-matter of claim 1-7 is considered to be novel over the available prior art.

2. Inventive Step

D1 is considered to represent the closest prior art to the claimed invention.

The final product of claim 1 is seemed to be very similar with the electrode of D1.

However the manufacturing process is mainly different in the range of heat treatment temperature. The highest temperature of claimed invention lies in the range of 120-180 degree in Celsius, however that of D1 does in the range of 800-900 degree in Celsius.

Accordingly the invention claimed in claim 1 is considered to involve an inventive step.

The inventions claimed in claim 2-7, which are dependent on claim 1, are considered to involve an inventive step also.

COPY FOR IB

PCT/KR2005/000302

PATENT COOPERATION TREATY

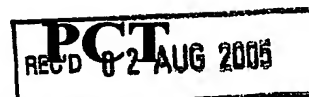
From the
INTERNATIONAL SEARCHING AUTHORITY

To:

Ki-Ryung, Kim

KING ROAD PTLF, Suite 201, Seo-Joh Bldg., 103-15
Garwol-Dong, Yongsan-Gu, Seoul 110-602 Republic of Korea

18/8

WRITTEN OPINION OF THE PCT
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) 25 JULY 2005 (25.07.2005)Applicant's or agent's file reference
wa-pct-0115

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/KR2005/000302

International filing date (day/month/year)

02 FEBRUARY 2005 (02.02.2005)

Priority date (day/month/year)

05 FEBRUARY 2004 (05.02.2004)

International Patent Classification (IPC) or both national classification and IPC

IPC7 B23H 1/04

Applicant

PUNG KUK EDM WIRE MANUFACTURING CO., LTD et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

TAK, Hyeong Yeop

Telephone No. 82-42-481-5408



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/KR2005/000302

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
☐ table(s) related to the sequence listing

b. format of material

- ☐ in written format
☐ in computer readable form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/KR2005/000302

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 7	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 7	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 7	YES
	Claims		NO

2. Citations and explanations :

Claim 1-6 relate to a manufacturing method of an electrode wire for EDM.

Claim 7 relates to an electrode wire for EDM.

The symbol 'm' (eg. used for thickness of zinc coating in claim 1) in descriptions and claims is considered the misprint of μm (micrometer).

It is considered that the degree is omitted in front of C (Celsius) in claim 1.

The degree (for angle) is considered to be omitted in claim 5.

Reference is made to the following documents.

D1 : JP 15-291030 A (OKIELECTRICCABLE COLTD) 14 OCTOBER 2003

1. Novelty

The subject-matter of claim 1-7 is considered to be novel over the available prior art.

2. Inventive Step

D1 is considered to represent the closest prior art to the claimed invention.

The final product of claim 1 is seemed to be very similar with the electrode of D1.

However the manufacturing process is mainly different in the range of heat treatment temperature. The highest temperature of claimed invention lies in the range of 120-180 degree in Celsius, however that of D1 does in the range of 800-900 degree in Celsius.

Accordingly the invention claimed in claim 1 is considered to involve an inventive step.

The inventions claimed in claim 2-7, which are dependent on claim 1, are considered to involve an inventive step also.